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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/686,659

10/17/2003

Keiichi Uno

03-037

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23400

7590

07/20/2006

POSZ LAW GROUP, PLC
12040 SOUTH LAKES DRIVE
SUITE 101
RESTON, VA 20191

EXAMINER

FRANTZ, JESSICA L

ART UNIT

PAPER NUMBER

3746

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/686,659

Applicant(s)

UNO ET AL.

Examiner

Jessica L. Frantz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 7-9 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/17/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/17/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. JP2002-304511 and JP2003-288186, filed on 10/18/2002 and 8/6/2003.

Information Disclosure Statement

2. The Information Disclosure Statement (IDS) submitted on 10/17/2003 is acknowledged. The references listed therein have been considered.

Specification

3. The disclosure is objected to because of the following informalities:

- On page 10, line 27 the word "gar" should be changed to "gear."
- On page 12, line 12, the word "mount" should be changed to "amount."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hara (US Patent Application Publication 2001/0015070). Hara discloses a hybrid compressor system for a refrigeration cycle system of a vehicle that includes an internal combustion engine (1) and an electric power source (50), the hybrid compressor system

comprising: an electric motor (52) that is rotated when the motor is energized by electric power supplied from the power source; a compressor device (2) that compresses refrigerant of the refrigeration cycle system and is connected to the engine and the motor to selectively receive drive force from one or both of the engine and the motor; and a control apparatus (26) that controls the motor, wherein when the engine is operated in an idling mode, the control apparatus energizes the motor to drive the compressor device alone or in cooperation with the engine and controls the energization of the motor to adjust load on the engine. (See Paragraph [0030] and Abstract). Hara also teaches that the power source is a vehicle battery (50). (Paragraph [0026]).

Also, Hara discloses that the hybrid compressor system further comprises a connecting mechanism (8) that is placed between the engine and the compressor device and selectively enables and disables conduction of drive force from the engine to the compressor device (Paragraph [0026]), wherein when the control apparatus controls the energization of the motor to adjust the load on the engine, the control apparatus also controls the connecting mechanism to control conduction of drive force from the engine to the compressor device. (Paragraph [0031]). It is inherent that the control apparatus controls the connecting mechanism to control conduction of drive force from the engine to the compressor device.

Also that when the motor drives the compressor device alone, the control apparatus controls the connecting mechanism to disable conduction of drive force from the engine to the compressor device; and when the motor drives the compressor device in cooperation with the engine, the control apparatus controls the connecting

mechanism to enable conduction of drive force from the engine to the compressor device. (Abstract and Paragraph [0031]) Again, it is inherent that the control apparatus controls the connecting mechanism to enable/disable conduction of drive force from the appropriate power source.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara (US Patent Application Publication 2001/0015070) in view of Official Notice. Hara is discussed above and further teaches that the vehicle includes an engine control unit (32), which controls the engine; and in regards to claim 2, when the compressor device is driven at the time of operating the engine in the idling mode, the control apparatus increases the electric power supplied to the motor to reduce the load on the engine (Abstract) and at the same time, the control apparatus transmits a signal to the engine control unit (Paragraph [0031] and Paragraph [0002]). However, Hara fails to teach that the purpose of sending the signal from the control apparatus to the engine control unit is for the purpose of controlling fuel injection of the engine in a manner that reduces fuel consumption of the engine. Hara does, however, mention that one of his key objectives is to reduce fuel consumption (Paragraph [0002]). The examiner gives Official Notice that engine controllers traditionally control fuel injection and that it would

have been obvious to use the engine controller provided by Hara to control fuel injection in a manner that would reduce fuel consumption.

In regards to claim 5, Hara discloses that when the control apparatus controls the connecting mechanism to disable conduction of drive force from the engine to the compressor device (Paragraph [0026]) and thereby to reduce the load on the engine, the control apparatus transmits a signal to the engine control unit (Paragraph [0031] and Paragraph [0002]). As stated above, it is inherent that the control apparatus controls the connecting mechanism to control conduction of drive force from the engine to the compressor device. Again, however, Hara fails to teach that the purpose of sending the signal from the control apparatus to the engine control unit is for the purpose of controlling fuel injection of the engine in a manner that reduces fuel consumption of the engine. Hara does, however, mention that one of his key objectives is to reduce fuel consumption (Paragraph [0002]). The examiner again gives Official Notice that engine controllers traditionally control fuel injection and that it would have been obvious to use the engine controller provided by Hara to control fuel injection in a manner that would reduce fuel consumption.

8. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara (US Patent Application Publication 2001/0015070) in view of Sakai et al. (US Patent Application Publication 2001/0018025). Hara is discussed above and fails to teach the inclusion of a drive force distributing mechanism that distributes the drive force of the engine to the motor and the compressor device and conducts the drive force of the motor to the engine and the compressor device, wherein when the motor is

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energized, the drive force distributing mechanism conducts both the drive force of the motor and the drive force of the engine to the compressor device. Sakai et al. teaches a drive force distributing mechanism (640). Sakai et al fails to mention that this drive force mechanism distributes the drive force of the engine to the motor and the compressor device and conducts the drive force of the motor to the engine and the compressor device, wherein when the motor is energized, the drive force distributing mechanism conducts both the drive force of the motor and the drive force of the engine to the compressor device. However, because Hara discloses the ability to power the compressor by either the motor or the engine or both the motor and the engine, and Sakai teaches the structural details of the drive force distribution mechanism that when the teachings are combined, the drive force distribution mechanism of Sakai et al. would inherently be capable of performing the steps set forth in the wherein clause.

Furthermore, in regards to claim 11, Sakai et al. discloses that the drive force distribution mechanism (640) is a planetary gear arrangement. (Paragraph [0114]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the drive force distributing mechanism of Sakai et al., specifically the planetary gear arrangement drive force distribution mechanism, with the hybrid compressor system of Hara in order to distribute the drive force of the engine to the motor and the compressor device and conduct the drive force of the motor to the engine and the compressor device, wherein when the motor is energized, the drive force distributing mechanism conducts both the drive force of the motor and the drive force of the engine to the compressor device.

In regards to claim 12, Hara is discussed above and fails to teach that the motor includes a rotatable shaft; the compressor device includes a rotatable shaft that is directly jointed with the rotatable shaft of the motor, and when the motor is energized, drive force exerted on the rotatable shaft of the motor is conducted to the rotatable shaft of the compressor device. Sakai et al. discloses that the motor includes a rotatable shaft (633); the compressor device includes a rotatable shaft (605) that is directly jointed with the rotatable shaft of the motor (See Figure 13); and given the two shafts are directly jointed, it is inherent that when the motor is energized the drive force exerted on the rotatable shaft of the motor is conducted to the rotatable shaft of the compressor device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the hybrid compressor system of Hara with the motor and compressor rotatable shafts of Sakai et al. in order to transmit drive force from the motor to the compressor device.

Allowable Subject Matter

9. Claims 7-9, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following substantially teach the invention as claimed:

- Irie et al (6,375,436)
- Iwanami et al. (US Patent Application Publication 2003/0118450)

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- Gabriel et al. (6,450,275)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica L. Frantz whose telephone number is 571-272-5822. The examiner can normally be reached on Monday through Friday 8:30a.m.-5:00p.m. E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on (571) 272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J.F.

JF



ANTHONY D. STASHICK
PRIMARY EXAMINER